(b) This section does not apply to balloons that incorporate a basket or gondola.

[Amdt. 31–2, 30 FR 3377, Mar. 13, 1965, as amended by Amdt. 31–3, 41 FR 55474, Dec. 20, 1976]

### § 31.65 Position lights.

(a) If position lights are installed, there must be one steady aviation white position light and one flashing aviation red (or flashing aviation white) position light with an effective flash frequency of at least 40, but not more than 100, cycles per minute.

(b) Each light must provide 360° horizontal coverage at the intensities prescribed in this paragraph. The following light intensities must be determined with the light source operating at a steady state and with all light covers and color filters in place and at the manufacturer's rated mimimum voltage. For the flashing aviation red light, the measured values must be adjusted to correspond to a red filter temperature of at least 130 °F:

(1) The intensities in the horizontal plane passing through the light unit must equal or exceed the following values:

| Position light | Minimum intensity (candles) |
|---|---|
| Steady white | 20 |
| Flashing red or white | 40 |

(2) The intensities in vertical planes must equal or exceed the following values. An intensity of one unit corresponds to the applicable horizontal plane intensity specified in paragraph (b)(1) of this section.

| Angles above and below the horizontal in any vertical plane (degrees) | Minimum intensity (units) |
|---|---|
| 0 | 1.00 |
| 0 to 5 | 0.90 |
| 5 to 10 | 0.80 |
| 10 to 15 | 0.70 |
| 15 to 20 | 0.50 |
| 20 to 30 | 0.30 |
| 30 to 40 | 0.10 |
| 40 to 60 | 0.05 |

(c) The steady white light must be located not more than 20 feet below the basket, trapeze, or other means for carrying occupants. The flashing red or white light must be located not less than 7, nor more than 10, feet below the steady white light.

(d) There must be a means to retract and store the lights.

(e) Each position light color must have the applicable International Commission on Illumination chromaticity coordinates as follows:

(1) *Aviation red*—

$y$ is not greater than 0.335; and $z$ is not greater than 0.002.

(2) *Aviation white*—

$x$ is not less than 0.300 and not greater than 0.540;

$y$ is not less than $x-0.040$ or $y_o-0.010$, whichever is the smaller; and

$y$ is not greater than $x+0.020$ nor $0.636-0.0400\ x$;

Where $y_o$ is the $y$ coordinate of the Planckian radiator for the value of $x$ considered.

[Doc. No. 1437, 29 FR 8258, July 1, 1964, as amended by Amdt. 31–1, 29 FR 14563, Oct. 24, 1964; Amdt. 31–4, 45 FR 60179, Sept. 11, 1980]

## Subpart E—Equipment

### § 31.71 Function and installation.

(a) Each item of installed equipment must—

(1) Be of a kind and design appropriate to its intended function;

(2) Be permanently and legibly marked or, if the item is too small to mark, tagged as to its identification, function, or operating limitations, or any applicable combination of those factors;

(3) Be installed according to limitations specified for that equipment; and

(4) Function properly when installed.

(b) No item of installed equipment, when performing its function, may affect the function of any other equipment so as to create an unsafe condition.

(c) The equipment, systems, and installations must be designed to prevent hazards to the balloon in the event of a probable malfunction or failure.

[Amdt. 31–4, 45 FR 60180, Sept. 11, 1980]

## Subpart F—Operating Limitations and Information

### § 31.81 General.

(a) The following information must be established: